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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/692,697

10/23/2003

Krzysztof W. Przytula

HRL135

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EXAMINER

PATEL, SHAMBHAVI K

ART UNIT

PAPER NUMBER

2128

MAIL DATE

DELIVERY MODE

09/27/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/692,697	PRZYTULA ET AL.	
	Examiner	Art Unit	
	Shambhavi Patel	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 11-26, 28-43, 45-60 and 62-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-26, 28-43, 45-60 and 62-68 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. This Office Action is in response to the Amendment, Remarks, and Affidavit submitted 23 August 2007.
2. Claims 1-9, 11-26, 28-43, 45-60 and 62-68 have been presented for examination.

Response to Arguments

3. Applicant's arguments submitted 23 August 2007 regarding the 1.131 affidavit have been considered, but are not persuasive:
 - i. The declaration filed on 23 August 2007 under 37 CFR 1.131 has been considered but is ineffective to overcome the Thompson reference.
 - ii. The Applicants attribute **seven months** to diligence by attorney. The Examiner notes that this is a substantial amount of time, and that no evidence has been submitted to support this claim.
 - iii. The Examiner notes that it appears that the Applicant's representative is making statements on behalf on the Applicant that are not supported/contained in the declaration.

For example:

The Applicants respectfully submit that the Examiner is mistakenly equating "evidence of earlier conception" with "related external publications and product embodying inventions that were disclosed prior to the invention disclosure date of 9/23/2002" (referring to page 3, sections 6 and 7 of the invention disclosure). The Applicants submit that by Applicant's own admission on sections 6 and 7 of the invention disclosure, the Applicants stated that there was no publication or public presentation related to the invention prior to 9/23/2002; there were no related invention disclosures or patent applications prior to 9/23/2002; there were no proposals or reports or other documents relating to this invention prior to the present invention disclosure filed 9/23/2002; the

While the arguments state the Applicants are making the statement, it appears to be a statement made by the attorney.

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- iv. Applicants claim “constructive” reduction to practice, but then state:

In addition, by the Applicant’s own admission on section 4c of the invention disclosure, the Applicants clearly stated that on September 23, 2002, several documents (dated, signed, and witnessed), including photos, drawings, and data sheets showing reduction to practice of the present invention were located at HRL Laboratories, Bldg. 254, Room 4G26.

The above statement implies actual reduction to practice, and the argument made by Applicants remains unclear.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. **Claim 1-9, 11-26, 28-43, 45-60 and 62-68 are rejected under 35 U.S.C. 102(a)** as being clearly anticipated by Thompson et al. (**‘Evaluation of Bayesian Networks Used for Diagnostics’**, March 2003), herein referred to as Thompson.

Regarding claims 1, 18, 35, and 52:

Thompson discloses a method for automatically evaluating Bayesian network models for decision support comprising:

- a. receiving a Bayesian Network (BN) model (**section 2.2 ‘Bayesian Network Models’**) including evidence nodes and conclusion nodes (**section 2.2 ‘Bayesian Network Models’ paragraph 6**), where the conclusion nodes are linked with the evidence nodes by causal dependency links (**figure 1**), and where the evidence nodes have evidence states and the conclusion nodes have conclusion states (**section 2.2 ‘Bayesian Network**

Models' paragraph 6). The *'evidence nodes' in the instant application are analogous to the 'observation nodes' in the prior art and the 'conclusion nodes' in the instant application are analogous to the 'component nodes' in the prior art.*

- b. setting the states of the conclusion nodes to desired conclusion states (**section 3.2 paragraph 4 steps 1 and 2**) and determining, by propagating down the causal dependency links, a corresponding probability of occurrence of evidence states of the evidence nodes (**section 3.2 paragraph 4 steps 3.1 – 3.4**) and producing, from the probability of occurrence, a plurality of samples of most likely states of the evidence nodes (**section 3.2 paragraph 4 step 3**)
- c. setting the states of the evidence nodes to states corresponding to the plurality of samples of the evidence states (**section 3.2 paragraph 6 step 1**), and propagating the evidence states back up the causal dependency links to the conclusion nodes, to obtain a plurality of probabilities of the resulting states of the conclusion nodes (**section 3.2 paragraph 6 step 2**)
- d. outputting a representation of the plurality of the probabilities of the states of the conclusion nodes (**section 3.2 paragraph 8**)

Regarding **claims 18 and 35**, **Thompson discloses** an apparatus for performing the above steps (**section 4.4**), specifically a Dell Dimension 8100 computer.

Regarding **claim 52**, **Thompson discloses** a computer program product for performing the above steps (**section 4.4**), specifically a Windows executable program.

Regarding claims 2, 19, 36, and 53:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the BN model further includes at least one auxiliary node causally linked between at least one

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evidence node and at least one conclusion node (section 2.2 'Bayesian Network Models' paragraph 6).

Regarding claims 3, 20, 37, and 54:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the sampling is performed by a Monte Carlo algorithm (section 3.2 paragraph 4 step 3).

Regarding claims 4, 21, 38, and 55:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a complete representation of probabilities of states for all conclusions given a particular set of combinations of conclusion states (section 4.1 paragraph 1).

Regarding claims 5, 22, 39, and 56:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a graphical representation (section 4.1 paragraph 1).

Regarding claims 6, 23, 40, and 57:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a matrix of averages of probabilities of the conclusion states for implicated conclusions versus a selected set of combinations of conclusion states; whereby a user can determine an accuracy of the BN model's propensity to yield proper conclusions (section 3.2 paragraph 8; section 4.2).

Regarding claims 7, 24, 41, and 58:

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Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a graphical representation in the form of a two-dimensional intensity matrix and a three-dimensional bar chart (**figure 4; section 4.2; figure 5**).

Regarding claims 8, 25, 42, and 59:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the conclusion nodes are weighted by weights representing their importance; whereby the accuracy of the BN model's propensity to yield proper conclusions may be weighted for particular conclusions based on their relative importance (**section 3.2 paragraph 7**).

Regarding claims 9, 26, 43, and 60:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the BN model models a diagnostic domain, with the conclusion nodes representing component failures or diseases, the evidence nodes representing recognizable symptoms of those failures or diseases, and the auxiliary nodes representing additional information useful, in conjunction with the evidence nodes and conclusion nodes (**section 2.2 paragraph 6**).

Regarding claims 10, 27, 44, and 61:

cancelled

Regarding claims 11, 28, 45, and 62:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the sampling is performed by a Monte Carlo algorithm (**section 3.2 paragraph 4 step 3**).

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Regarding claims 12, 29, 46, and 63:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a complete representation of probabilities of states for all conclusions given a particular set of combinations of conclusion states (**section 4.1 paragraph 1**).

Regarding claims 13, 30, 47, and 64:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a graphical representation (**section 4.1 paragraph 1**).

Regarding claims 14, 31, 48, and 65:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a matrix of averages of probabilities of the conclusion states for implicated conclusions versus a selected set of combinations of conclusion states; whereby a user can determine an accuracy of the BN model's propensity to yield proper conclusions (**section 3.2 paragraph 8; section 4.2**).

Regarding claims 15, 32, 49, and 66:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the outputted representation is a graphical representation in the form of a two-dimensional intensity matrix (**figure 4**) and a three-dimensional bar chart (**figure 5**).

Regarding claims 16, 33, 50, and 67:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the conclusion nodes are weighted by weights representing their importance; whereby an

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accuracy of the BN model's propensity to yield proper conclusions may be weighted for particular conclusions based on their relative importance (**section 3.2 paragraph 7**).

Regarding claims 17, 34, 51, and 68:

Thompson discloses automatically evaluating Bayesian network models for decision support, wherein the BN model models a diagnostic domain, with the conclusion nodes representing component failures or diseases, the evidence nodes representing recognizable symptoms of those failures or diseases, and the auxiliary nodes representing additional information useful, in conjunction with the evidence nodes and conclusion nodes (**section 2.2 paragraph 6**).

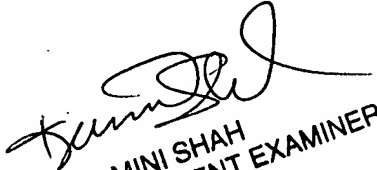
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shambhavi Patel whose telephone number is (571) 272-5877. The examiner can normally be reached on Monday-Friday, 8:00 am – 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on (571) 272-2279. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SKP


KAMINI SHAH
SUPERVISORY PATENT EXAMINER